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ABSTRACT

This report presents a health education curriculum designed to train professionals to function in the combined capacity of community and school health educators. A systems approach is utilized and it is suggested that the components of the program include recruitment, guidance, education, and placement of the students. The curriculum was the first phase developed and a three tiered approach is used. The first level includes education in the communication skills, social sciences, and basic and applied sciences. Acquiring these skills enables the student to progress to the second tier of learning the Administrative, Educational, Community Development, and Socio-Bionomic skills. This knowledge then enables the student to participate in the problem solving seminars and field work which prepare him to attack the health education problems to be faced on the job. Integrated with this three-tiered approach is continuous guidance, counseling, and explanation.
(RSM/Author)

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A SYSTEMS APPROACH TO THE DESIGN

OF A MODEL UNDER-GRADUATE CURRI-

CULUM FOR HEALTH EDUCATORS

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Introduction

"Positive health is not something that one human can hand to, or require of another. Positive health can only be achieved through intelligent effort on the part of each individual. Absent that effort, health professionals can only insulate the individual from the more catastrophic results of his ignorance, self-indulgence or lack of motivation." (1) As this statement indicates, the application of intelligent individual effort toward achieving desirable health goals implies individual and community acquisition of health knowledge. Until sound health behaviors are known, accepted and applied, the individual and his society can act only with random correctness.

This need for the community and the individual to acquire health information has led to the development of the health education profession, and to two types of training programs, one concentrating on health instruction in the schools, the other on health instruction in the community. The potential health educator is expected to declare that his interest in one or the other. Once the choice is made, he enters a program designed to train him in that field of specialized health education. The student, in all likelihood, will be isolated from the alternative area of health education, the isolation being reinforced by the location of the alternative form of health education in some other school or college of the University. For example, if he is interested in school health education, he is likely to have little contact with

the community health education program which the School of Public Health conducts. Conversely, the potential community health educator will have little awareness of the school health program which is carried out by the College of Education.

That universities have traditionally educated the community health educator in one school and the school health educator in another has mitigated against utilizing the knowledge that education for health, whether it takes place in the school or in the community, is based on the same principles. While the selection of educational methods may differ for specific purposes, the same range of methods must be familiar to both the school and the community health educator. The unfortunate results of this disparate preparation has been the total separation of functions of these two kinds of educators once they reach the community. The incongruity of this dual approach is that it appears to promote minimal participation of the community health educator in serving the sizable portion of the population enrolled in schools while it tends to encourage the school educator to largely ignore the fact that his students inhabit an environment beyond the school house door. In a recent report by the National Commission on Community Health Services this dichotomous training was challenged:

"In the past, 'Health Education' has been divided between two teams-the public health educators and the school health educators. Granted there is a need for individuals whose specialty may be one or the other, education for health is too basic to comprehensive health services to allow for outmoded divisions of territory among its practitioners. All health education personnel should be given courses covering the needs of the rapidly expanding health field, including administration, community organization, and action planning." (2)

In respect to "education for health" this report recommended that "Schools of Public Health and Schools of Education should cooperate in training health educators." (3)

The faculties of the Department of Community Health of the School of Medicine and the Department of Health and Physical Education of the School of Education sought to explore ways in which the problem could be alleviated. A small group of interested faculty was appointed by the Deans of the respective schools to study the situation. The group was charged with the objective not only to seek a solution to the present dichotomous training, but to consider the severe manpower shortage in the field.

With the manpower shortage uppermost in mind, an in depth study of the situation led to the hypotheses that a health education curriculum could be developed at the undergraduate level through which a "comprehensive health educator" could be trained. It was further hypothesized that this new breed of health educator could function in the combined capacity of community health educator and school health educator on a joint appointment basis between school and community agencies. The comprehensive health educator would also be qualified to pursue graduate study.

This requirement for dual competence places a heavy responsibility on the university which plans to train such people, for its graduates must be professionally competent in two areas and must meet all requirements for employability in both areas.

Methodology

As a means of resolving all of these demands upon the curriculum simultaneously, it was decided to take a systems approach to the design of the curriculum. The systems approach might be best described as a set of techniques that identify the purposes of a project, derive the components of these purposes and develop measurements to determine whether or not the purposes have been accomplished. In the case of the Comprehensive Health Educator program, the overall purpose was defined to be: "the educating of undergraduate health education majors who are competent to work in both school and communities, who are deemed professionally acceptable by professional school and community health educators and who meet all of the qualifications for entry level jobs in the field of health education".

The components of this program then have to be recruitment, guidance, education and placement of the students. In that there must be a clear educational program before recruitment can begin; recruitment before guidance; and a educational program, recruitment and guidance before placement can begin, it was decided to develop the curriculum as a first phase in the development of the program.

In discussing the curriculum it became obvious to the authors it would be they key to the competence, acceptability and employability of the graduates. Therefore systems techniques were applied to the concept of a health education curricula in order to identify the components of the curriculum

which would assist in achieving the overall purposes of the comprehensive health educator program.

Competence can be built into a curriculum by analyzing the tasks which are performed by the practicing health educator. Measurement of the accomplishment of the competence is made possible by stating the competence objectives in behavioral terms which are observable by the instructors in the program.

Acceptability was defined as meeting the educational standards which have been developed by professional Health Education groups. Both the school health educators and the community have such standards. The measurement of the accomplishment of these standards was again based on observable student behaviors. Employability was defined as the student's possession of the credentials which allow him to meet the employment standards established by schools and health agencies. These standards can be stated as two: teacher certification and graduation from a professionally approved program. The measurement of the accomplishment of employability is a curriculum which meets the educational guidelines of the Missouri Board of Education and the health educator societies.

The use of the systems approach led to the following methodological approach to the curriculum design:

1. Review the written standards of all professional bodies (4,5,6)
2. Review teacher certification requirements (7)
3. Search and review the literature dealing with the actual duties of health educators (see general references)

4. Converse with leaders in the school and community health education as to future needs for requirements of health educators.
5. Review the University's requirements for conferring the bachelors degree (8).

These steps led to the listing of 247 different standards or requirements of the various professional groups and the State Board of Education. Reducing these statements to a working number which could be used to design a curriculum presented a problem. The solution to this problem was to use a variation of the "Q-sort". (9)

This approach was selected as a means of reducing the 247 individual statements of competence required by the above agencies to a workable, organized set of standards for the curriculum. The first sort was conducted by the systems analyst because of his alleged lack of bias toward either school or community health education. After he established seven general categories of competence, the professional health educators among the authors sorted all 247 statements of competence into these seven categories. This led to an almost uniform agreement on the general categorization of the statements.

This general categorization was far too gross to allow behavioral objectives to be established. Therefore the variation of the Q-sort technique was used on each of the seven sub-categories. Again, the systems analyst established the sub-categories and the health education professionals sorted the statements into the sub-categories established by him. The result was that the seven categories were sub-

divided into from 3-8 subcategories. These sub-categories were sufficiently specific to be converted to behavioral objectives.

Results

In this limited space it is impossible to show the complete results of the curriculum study. Therefore, we decided to present an overview of this curriculum which meets the requirements for certification as well as the standards of all professional bodies.

Major Category I-The administrative functions of the Comprehensive Health Educator. (52 professional recommendations)

A. Sub-categories

1. Recruitment, supervision and appraisal of of employees.
2. Budgeting and management control.
3. Establishment of sound personnel policies
4. Grantsmanships.
5. Maintenance of records which allow complete reporting to superiors and to the public.
6. Planning techniques,
7. Maintain rapport with co-workers, superiors and employees.

Major Category II-The Training of Fellow Professionals (Health or Education) in the need for and uses of Health Education (20 professional recommendations).

A. Sub-categories

1. Selection of appropriate educational material for professional groups,
2. Organization and planning of in-service programs.
3. Organization and planning of activities for facilitating communication between the agency-school and the community.

Major Category III-Fulfill the Tasks Expected of a Health Education Professional (16 professional recommendations).

A. Sub-categories

1. Maintain a collection of reference materials in health education and various health topics for use by agency, staff and community groups.
2. Assume responsibility for improving the quality of the profession.

3. Keep abreast of relevant reports, literature and research findings.
4. Assume the professional responsibility to publish.

Major Category IV-Coordination of Health Education Activities with Other Health Professionals (22 professional recommendations).

A. Sub-categories

1. Educate other health professionals in the educational approach.
2. Use other health professionals at appropriate points in health programs.
3. Planning of programs together with other health professionals.
4. Develop and maintain a professional relationship with other health professionals.
5. Recognize, respect and utilize the ethics of other disciplines.

Major Category V-Use Education and the Correct Educational Tool Where the Health Problem is Appropriate (52 professional recommendations).

A. Sub-category

1. Consult with other professions when requested
2. Assist in the planning of the health program, particularly the health education component.
3. Assess educational progress and need for program change.
4. Analyze forces and factors likely to change behavior.
5. Identify communication patterns in community groups.
6. Define educational objectives.
7. Develop needed educational methods, materials and resources.
8. Measure levels of knowledge of community groups.

Major Category VI.-Identify the Need for and the Involvement of the Community and Its Leaders in Health Education Programs (62 professional recommendations).

A. Sub-category

1. Prepare community profiles.
2. Analyze characteristics of target groups.
3. Analyze community leadership and decision making mechanisms.
4. Identify community groups which need to be educated.
5. Assess health education needs as they relate to various problems and target groups.
6. Identify and assess barriers to progress.
7. Involve community leaders in supporting health education goals.
8. Serve as a bridge between school and community health education programs and alert health,

agency personnel to opportunities for teachers, students, and parents.

Major Category VII-Material the Health Educator will Teach (23 professional recommendations)

A. Sub-categories

1. Principles concerned with the maintenance and improvement of individual health,
2. Principles related to hazards of life health.
3. Understanding of the problems related to problems related to preparation for home and family life.
4. Principles of community health including the values and limitations of community, state, national and world health organizations and agencies and the services they have to offer.
5. Methods by which health needs and interest of children and communities can be identified.
6. Understanding the qualifications and limitations of various health practitioners as a basis for selection and professional health care.
7. Understanding the adequacy and effectiveness of community resources for medical and dental care.

Discussion

The recommendations for these groups clearly revealed that any combined school and community health educator should be able to identify and organize personnel and resources in such a manner that those community health problems which are amenable to solution through education and community action are discovered.

The qualified health educator must also have a sufficiently thorough knowledge of educational tools and community development techniques to enable him to design and consider the full range of alternative solutions to health education problems. He must also have the managerial skills which will enable him to select the solution which maximizes the utilization of

the resources which are available. He must possess the budgeting and grantsmanship skills which will enable him to convince funding agencies to finance his programs if at present, there are not adequate funds available.

It cannot be said that possession of the above skills is sufficient. Selection of program and obtaining of funds are merely prerequisites for the important task of implementation. The successful health educator must be capable of educating the ignorant and activating the passive. He must not only have skills himself but also must possess the capability to select and direct subordinates in the application of these skills. He must show his fellow teachers and agency co-workers the means by which health education can be incorporated into their classes and programs.

The successful health educator must also have the ability to measure the educational effectiveness, community effectiveness and cost effectiveness of the health education programs which he implements and administers. These evaluative skills will give the health educator the capability of avoiding the repetition of past mistakes. In addition, the comprehensive health educator who is a competent evaluator will be able to define new problems as he measures the effectiveness of completed programs. For example, the program which has been evaluated as 70% successful shows the health educator that there is an unreached 30%. This unsolved problem then becomes the basis for a new round of alternative listing, program implementation and program assessment.

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The traditional approach toward developing a person who is skilled in administering education for health programs would be to require coursework in education, coursework in administration and coursework in health. There would be the assumption or hope that the student would sort out the irrelevancies and unify the meaningful even though the material was divergently presented. The authors rejected this approach and recommended that a new approach be taken in educating the comprehensive health education student. This new approach would be based on the use of problem solving techniques as means of relating education to community health problems. Students would be confronted with case study problems or actual field training problems which would require them to use their previously acquired administrative, educational, community development and health skills. It is the authors' feeling that this would force the integration of the separate disciplines in a manner that would train students to effectively function after graduation. This interdisciplinary approach to solving health problems through education would become the core of the comprehensive health educator program.

However, the authors recognized that this interdisciplinary approach cannot be taught until the basic disciplines have been learned by the students. Therefore, we recommend that comprehensive health educators be trained to a beginning level of competence in Administration (education, public health and general), Education (history, philosophy, behavioral theory, group dynamics, and methods), Community Development (community analysis, power centers, use of media), and health.

The health skills that are necessary to training the health educator present a difficult problem. The present health curricula does not provide for a holistic approach to man. It tends to be directed either toward function (anatomy, Physiology, etc), disease (Medicine, Nursing), or community services (Public Health). None of these skills is more than peripherally relevant to the health educator. The effective comprehensive health educator must be more than an instructor in physiological phenomena. He must know and communicate the concept that man is an organism whose physiologic function is dependent on its interaction with the organism's environment.

For example, childbirth cannot be understood only as isolated human biology. It must be considered with the sociological implicates of family structure, the societal problems of population control and the psychological preparation of responsible parenthood. In the same vein, maintenance of circulatory health requires appropriate behaviors in response to urbanization, social pressure and the psychological gratifications associated with diet, smoking and physical conditioning.

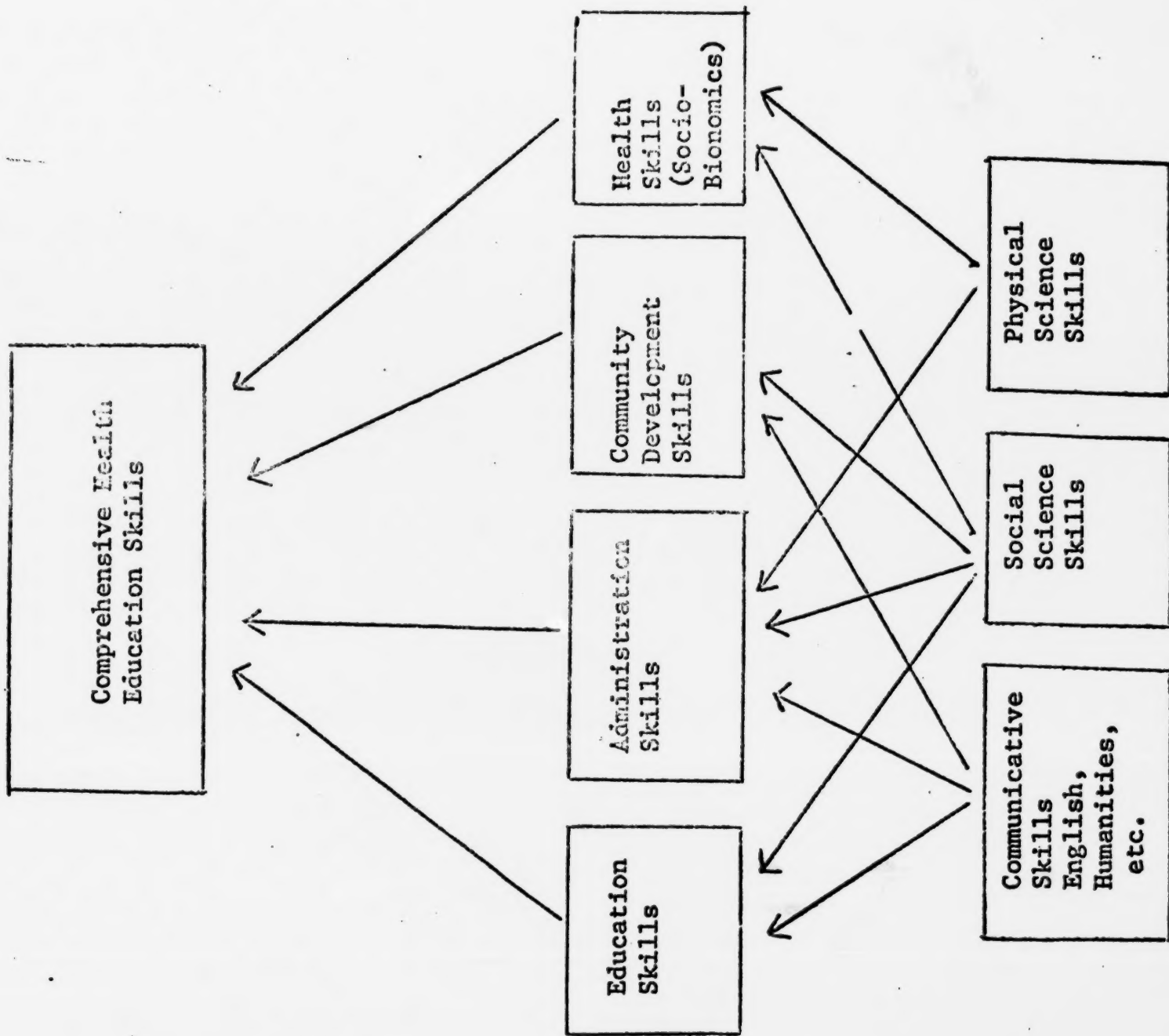
Simply requiring students to endure a scattering of Physiology, Psychology, Sociology, etc. course will not assure the ideal of an integrated approach to man. Unless the student has the natural insightful ability to integrate the separate parts, he will tend toward spending four years achieving the classic definition of "learning more and more about less and less". Therefore, it seems essential that the prime

effort of the comprehensive health educator program should be to integrate the separate biological, social and behavioral fields. This integration must be carried out in such a manner that the health educator will approach his behavior changing tasks within the organism-environment framework. The field of Biology provides a useful term for describing this framework. The term is "Bionomics" which is defined as "the totality or pattern of relations between organisms and their environment". The word is derived from the Greek roots "bio", meaning life, and "nom" meaning management. To this idea of "life management" can be added the concept of societal life. Hence, it is suggested that health educators be trained in the principles of Socio-Bionomics.

Socio-Bionomic study would be found on a thorough preparation in the sciences pertinent to its purview. The health educator trained in Socio-Bionomics will have studied Physiology not because of its importance to his work but rather because it is a foundation for understanding this "totality" of relations between the human organism and his environment. In like manner, some depth of knowledge in the fields of psychology, sociology, anthropology, etc. will be necessary. This previous acquisition to knowledge might be considered analogous to the Education major's study of Speech. The future teacher studies and practices the principles of Speech not to become an orator but because the knowledge of verbal communication skills is essential to the learning of educational skills.

The health education curriculum was planned to culminate in a series of courses or seminars which will integrate traditional mental, physical and societal health fields. These courses or seminars should follow the Socio-Bionomic approach. A conceptual model of this curriculum is presented in Figure 1.

This curriculum was not considered conceptually complete until it was understood that there was a need for new approaches in student counseling. The integration of the many disciplines which are proposed contain the potential for bewildering students. The seemingly haphazard amalgamation of courses may lead to a charge of irrelevance which might be a justified accusation in the absence of a concerted effort to communicate with the students. The concerted effort must be made during the three years which precede the integrative seminars of the senior year in order that the students be made aware of the viability of his curriculum. It will be essential that the faculty be provided with the time and the tools which will allow them to inform the students about the purpose and direction towards which the coursework is leading them. Failure to provide for this encouragement and counseling could result in disenchantment and low morale of too many initially motivated students and thereby cripple or ruin the program through an excessive dropout rate.



FINAL
SKILLS

SECONDARY
SKILLS

PRIMARY
SKILLS

Guidance

In summary, the authors believe that the curriculum for the comprehensive health educator should be a three-tiered preparation. At the first level, there should be education in the communication skills (English, Speech, Humanities), social sciences (Psychology, Anthropology, Sociology, Political Science, etc.) and basic and applied sciences (Anatomy, Physiology, Bio-chemistry, Mathematics, etc.). Acquiring these skills will enable the student to progress to the second tier of learning the Administrative Educational, Community Development and Socio-Bionomic skills. This knowledge will then enable the students to participate in the problem solving seminars and field work which will prepare him to attack the health education problems that he will face on the job. Integrated with this three-tiered approach will be continuous guidance, counselling and explanation.

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